APPLICATION FOR HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM)

OFFICE USE ONLY

APPLICATION #: OPM-0622

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [ ] Renewal/Update

Manufacturer Information

Manufacturer: Herman Miller Inc

Manufacturer's Technical Representative: Daniel Teich

Mailing Address: 855 E Main Ave Mail Stop 441, PO Box 302, Zeeland, MI 494641366

Telephone: (616) 654-3807 Email: dan_teich@hermanmiller.com

Product Information

Product Name: Herman Miller Mora System

Product Type: Wall- and Floor-Mounted Cabinets, Cantilevered Worksurfaces and Sink Cabinets

Product Model Number: Mora System

General Description: Healthcase casework solutions that include wall- and floor-mounted cabinets, cantilevered worksurfaces and sink cabinets

Applicant Information

Applicant Company Name: Herman Miller Inc

Contact Person: Daniel Teich

Mailing Address: 855 E Main Ave Mail Stop 441, PO Box 302, Zeeland, MI 494641366

Telephone: (616) 654-3807 Email: dan_teich@hermanmiller.com

Title: Sr. Codes Engineer

Registered Design Professonal Preparing Engineering Recommendations

Company Name: CRITICAL STRUCTURES

Name: Eric Stovner California License Number: S4204

Mailing Address: 1350 Coronado Ave., Long Beach, CA 90804

Telephone: (310) 530-3050 Email: estovner@critical-structures.com

HCAI Special Seismic Certification Preapproval (OSP)

☐ Special Seismic Certification is preapproved under OSP OSP Number:

Certification Method

Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950-16

☐ Other(s) (Please Specify):

*Use of criteria other than those adopted by the California Building Standards Code, 2019 (CBSC 2019) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2019 may be used when approved by HCAI prior to testing.

☒ Analysis

☐ Experience Data

☐ Combination of Testing, Analysis, and/or Experience Data (Please Specify):

HCAI Approval

Date: 1/17/2023

Name: Jeffrey Kikumoto Title: Senior Structural Engineer

Condition of Approval (if applicable):

SUPPORTS & ATTACHMENTS PRE-APPROVAL OPM-0622

THIS PRE-APPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE (CBC)

GENERAL NOTES:

1. THIS HCAI PRE-APPROVAL OF MANUFACTURER'S CERTIFCATION (OPM) IS BASED ON THE CBC 2019. THE DEMAND (DESIGN FORCES) FOR USE WITH THE OPM SHALL BE BASED ON CBC 2019.
2. THE PRE-APPROVAL IS FOR THE SEISMIC SUPPORTS AND ATTACHMENTS FOR THE UNIT TO THE STRUCTURE. IT DOES NOT ADDRESS OTHER LOADS.
3. THIS REPORT IS APPLICABLE TO APPLICATIONS ANYWHERE ALONG THE HEIGHT OF A BUILDING AND LOCATION WHERE S_{DS} IS AS FOLLOWS:
   a. $S_{DS} \leq 1.794$ FOR CH400/CH420 MODELS.
   b. $S_{DS} \leq 2.0$ FOR ALL OTHER MODELS.
4. THE DEMAND OR DESIGN FORCES FOR USE WITH THIS REPORT ARE IN ASD AND SHALL BE BASED ON ASCE 7-16 SECTION 13.3.1.
5. THE FOLLOWING ARE THE LOADS CONSIDERED FOR THE SUPPORTS AND ATTACHMENTS OF THE CASEWORK:
   - SELF-WEIGHT: ALL CASEWORK IN THIS REPORT
   - INTERIOR CABINET CONTENT: 33 LB/FT ^{3} (MODELS 200, 210, 220, 230, 300, 301, 400, 405, 415, 420)
   - WORK SURFACE FUNCTIONAL LIVE LOAD: 1.5 LB/IN OF PERIMETER OR 200# CONCENTRATED LOAD; WHICHEVER GOVERNS (MODELS 200, 210, 300, 301, 600, 607, 620)

COLD FORMED STEEL (CFS) SUPPORT FRAMING NOTES:

1. CFS STUDS SHALL BE 16 GA. MIN. AND Fy = 50,000 KSI. ACTUAL SIZE AND THICKNESS TO BE DESIGNED AND SPECIFIED BY S.E.O.R.
2. BLOCKING SHALL BE PLACED BETWEEN SMS STUDS WITH THE FOLLOWING MINIMUM PROPERTIES:

GAGE	DEPTH	WIDTH	ASTM SPECIFICATION	Fy (PSI)
16 (54 MILS)	3 5/8"	1 5/8"	ASTM A653 GRADE 50	50,000

ACTUAL SIZE AND THICKNESS TO BE DESIGNED AND SPECIFIED BY S.E.O.R.

WOOD BLOCKING NOTES:

1. BLOCKING SHALL BE PLACED BETWEEN WOOD STUDS WITH THE FOLLOWING MINIMUM PROPERTIES:
   - LUMBER SHALL BE COAST REGION DOUGLAS FIR-LARCH GRADE WITH A MAXIMUM MOISTURE CONTENT OF 19%
   - FRAMING SUCH AS STUDS, FURRING AND BLOCKING SHALL BE DF #2 OR BETTER.
   - BLOCKING SHALL BE 4x MIN., ACTUAL SIZE AND THICKNESS TO BE DESIGNED AND SPECIFIED BY S.E.O.R.

RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD OF THE BUILDING:

1. VERIFY THE ADEQUACY OF THE NEW OR EXISTING STRUCTURE TO RESIST THE FORCES AND WEIGHT SPECIFIED FOR THE EQUIPMENT IN ADDITION TO ALL OTHER LOADS IMPOSED ON THE STRUCTURE.
2. VERIFY THAT THE FASTENERS ARE LOCATED AT THE ADEQUATE END AND EDGE DISTANCE OF THE CFS STUD OR WOOD BLOCKING.
3. PROVIDE DESIGN OF SUPPLEMENTAL STRUCTURE REQUIRED TO SUPPORT THE SPECIFIED WEIGHTS AND FORCES.
4. VERIFY THAT THE INSTALLATION IS IN ACCORDANCE WITH THE 2019 CALIFORNIA BUILDING CODE (CBC) AND THE DETAILS SHOWN IN THIS REPORT.
5. VERIFY THAT THE ACTUAL EQUIPMENT WEIGHT, CENTER OF GRAVITY LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS AND THE MATERIAL AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN IN THIS REPORT.

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HCAI OPM-0622

SHEET 1 OF 25

MORA SYSTEM
EQUIPMENT MANUFACTURER: MILLERKNOLL
EQUIPMENT TYPE: MORA CASEWORK
MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
ERIC CHRISTIANSTOVNER
No. S 4204
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS	DATE
DATE: 2-3-2021	
PROJECT: 20-627	
ENGINEER: RO	
DRAFTER: MC	

SUPPORTS & ATTACHMENTS PRE-APPROVAL OPM-0622

THIS PRE-APPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE (CBC)

SEISMIC SUPPORTS AND ATTACHMENTS AND DESIGN PARAMETERS:

1. RISK CATEGORY IV
2. IMPORTANCE FACTOR, $I_p = 1.5$
3. COMPONENT AMPLIFICATION FACTOR, $a_p = 1.0$
4. COMPONENT RESPONSE FACTORS, $R_p = 2.5$
5. $z/h \leq 1.0$
6. SEISMIC COEFFICIENT:
   a. $S_{DS} \leq 1.794$ FOR CH400/CH420 MODELS.
   b. $S_{DS} \leq 2.0$ FOR ALL OTHER MODELS.
7. SEISMIC FORCES:
   a. HORIZONTAL FORCE, $E_h = 1.28W_p$ &VERTICAL FORCE, $E_v = 1.36W_p$FOR CH400/CH420 MODELS.
   b. VERTICAL FORCE, $E_h = 1.43W_p$ &VERTICAL FORCE, $E_v = 1.40W_p$FOR ALL OTHER MODELS.
8. CABINET CONTENT WEIGHTS ARE BASED ON THE UNIT INTERIOR VOLUME WITH AN ASSUMED CONTENT DENSITY PER THE APPLICABLE SCHEDULE FOR EACH UNIT.

FASTENERS:

1. SHEET METAL SCREWS (SMS) SHALL BE ¼" Ø (#14) AND COMPLY WITH ASTM C1513 & ANSI / ASME STANDARD B18.6.3.
2. WOOD SCREWS SHALL BE ¼" Ø (#14) PER ANSI / ASME STANDARD B18.6.1 WITH Fy = 70 KSI.

CLEAT:

1. CLEAT BY MILLERKNOLL SHALL BE 0.47" THICK BALTIC BIRCH (SPECIFIC GRAVITY, G = 0.71) WITH PRE-DRILLED HOLES FOR SUPPORTS AND ATTACHMENTS.
2. THE FOLLOWING CLEAT SPECIFICATION SHALL BE FOLLOWED:

CABINET WIDTH	CLEAT WIDTH (IN.)	CLEAT PART No.	QTY OF ANCHORS
18-23	14.22	IBHWV1	5
24-29	20.22	IB4SBM	6
30-35	26.22	IB4PHG	6
36-41	32.22	IB4PH1	8
42-47	38.22	IB4PH2	8
48	44.22	IB4PH3	9

INSTALLATION SEQUENCE:

1. WALL HUNG CABINETS SHALL BE INSTALLED IN THE FOLLOWING INSTALLATION SEQUENCE:
   A. ANCHOR CLEAT TO SUPPORT STRUCTURE.
   B. HANG CABINET FROM WALL CLEAT.
   C. PLACE SHIM AS REQUIRED.
   D. PLACE SUPPORTS AND ATTACHMENTS THROUGH SHIM TO SUPPORT STRUCTURE.

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SHEET 2 OF 25

MORA SYSTEM
EQUIPMENT MANUFACTURER: MILLERKNOLL
EQUIPMENT TYPE: MORA CASEWORK
MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
ERIC CHRISTIAN STOVNER
No. S 4204
STRUCTURAL
STATE OF CALIFORNIA

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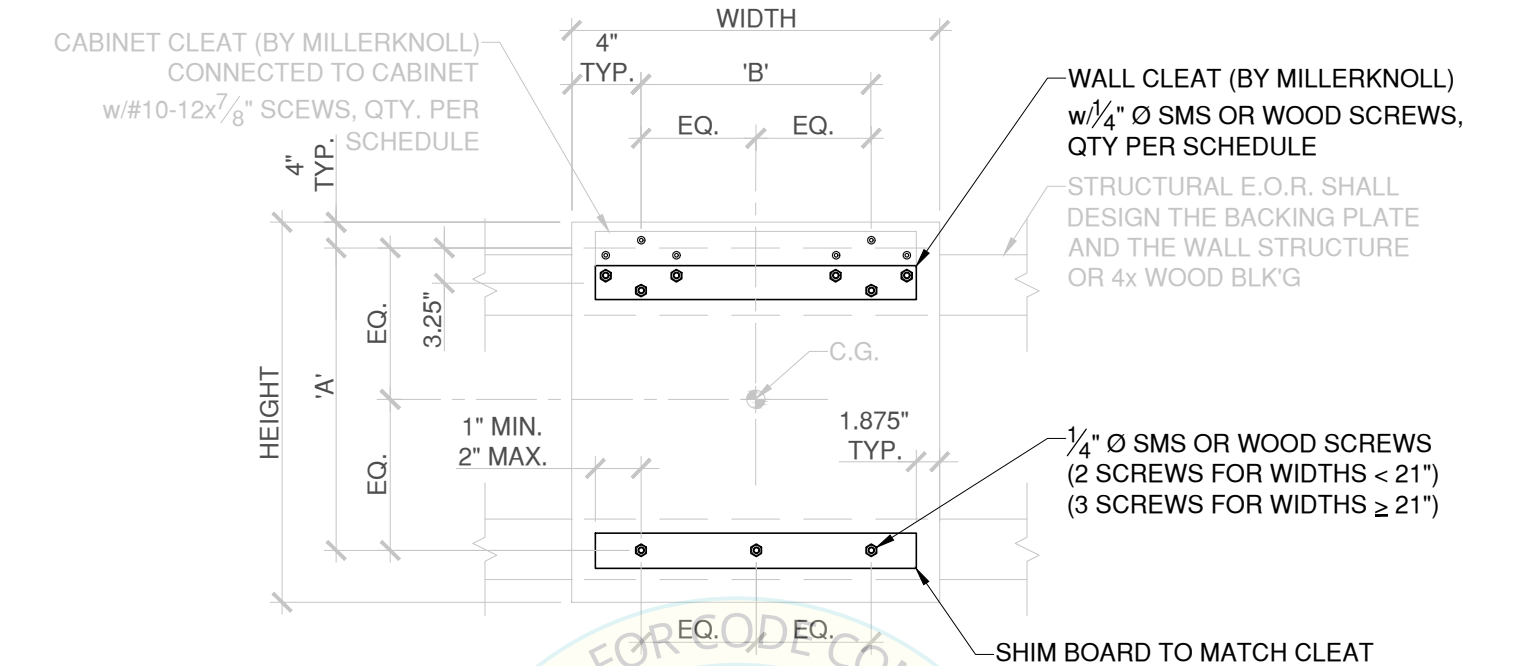
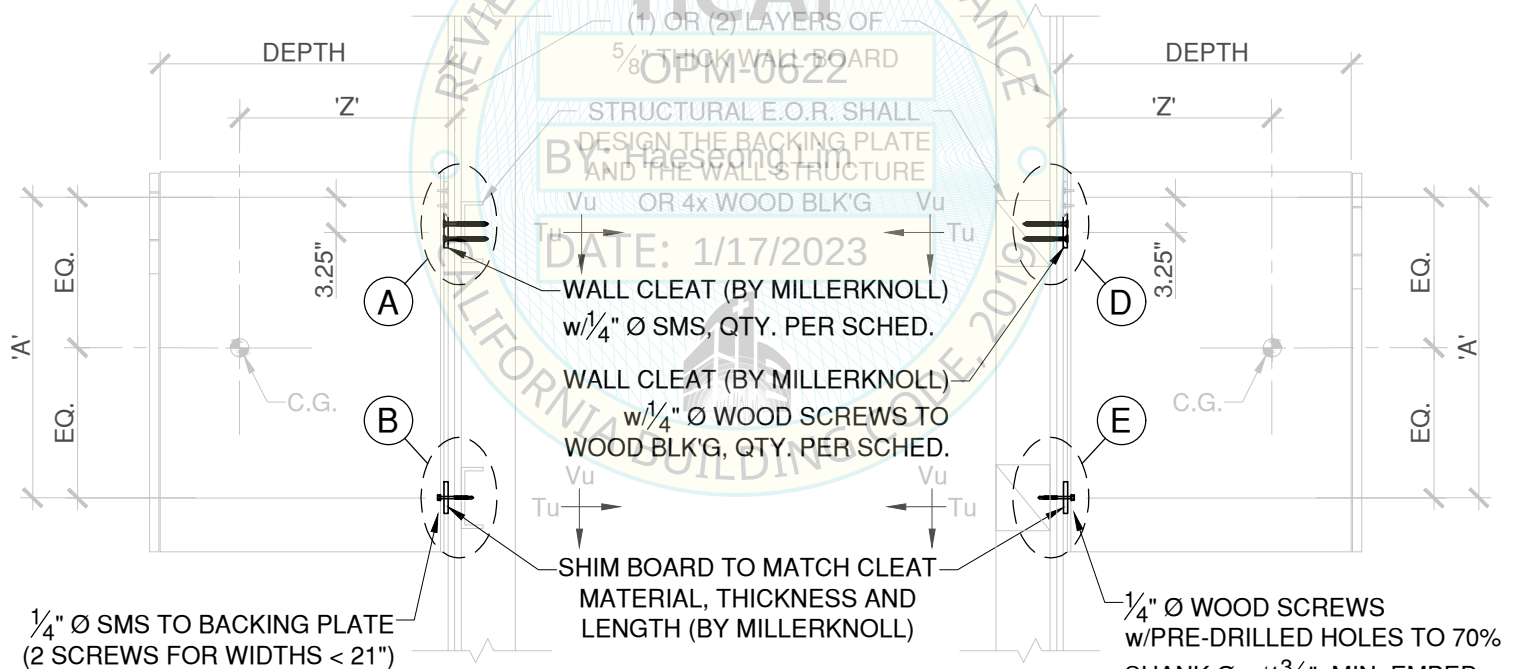


FRONT ELEVATION



SIDE ELEVATION

WALL CABINET
(CH200 / CH210 MODELS)

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SHEET 3 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
ERIC CHRISTIANSTOVNER
No. S 4204
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS	DATE
DATE: 2-3-2021	
PROJECT: 20-627	
ENGINEER: RO	
DRAFTER: MC	

WALL CABINET SCHEDULE[1]

MODEL NUMBER	DEPTH	WIDTH	HEIGHT	"A"	"B"	"Z"[2]	WEIGHT[3]	LIVE LOAD[4]	# OF TOP SCREWS	# OF BOTTOM SCREWS	E_h	E_v	SCREW FORCES (ASD)	
	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(LB)	(LB)			(LB)	(LB)	T (LB/ SCREW)	V (LB/ SCREW)
CH200.1819FM	19	18	20.18	12.18	9.7	10.75	189	200	5	2	270	76	126	58
CH200.1819SD	19	18	20.18	12.18	9.7	10.75	193	200	5	2	276	77	128	59
CH200.1819SM	19	18	20.18	12.18	9.7	10.75	189	200	5	2	270	76	126	58
CH200.2419FM	19	24	20.18	12.18	13.0	10.75	245	200	6	3	350	98	122	54
CH200.2419PC	19	24	20.18	12.18	13.0	10.75	229	200	6	3	327	91	116	51
CH200.2419SD	19	24	20.18	12.18	13.0	10.75	248	200	6	3	354	99	123	54
CH200.2419SM	19	24	20.18	12.18	13.0	10.75	245	200	6	3	350	98	122	54
CH200.3019FM	19	30	20.18	12.18	17.0	10.75	301	200	6	3	430	120	140	62
CH200.3019SD	19	30	20.18	12.18	17.0	10.75	304	200	6	3	434	121	141	63
CH200.3019SM	19	30	20.18	12.18	17.0	10.75	301	200	6	3	430	120	140	62
CH210.1918DT	19	18	20.18	12.18	9.7	10.75	176	200	5	2	251	70	120	55
CH210.1918FD	19	18	20.18	12.18	9.7	10.75	178	200	5	2	254	71	121	56
CH210.1918FP	19	18	20.18	12.18	9.7	10.75	174	200	5	2	249	70	119	55
CH210.1924DT	19	24	20.18	12.18	13.0	10.75	229	200	6	3	327	91	116	51
CH210.1924FD	19	24	20.18	12.18	13.0	10.75	233	200	6	3	333	93	118	52
CH210.1924FP	19	24	20.18	12.18	13.0	10.75	227	200	6	3	324	91	115	51
CH210.1930DD	19	30	20.18	12.18	17.0	10.75	290	200	6	3	414	116	136	61
CH210.1936DD	19	36	20.18	12.18	23.0	10.75	345	200	8	3	493	138	116	57

1. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THESE CALCULATIONS ENCOMPASS ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
2. MAXIMUM DEPTH TO CENTER OF GRAVITY NOT TO EXCEED "Z" TABULATED ABOVE. (2) LAYERS OF 5/8" THICK WALL BOARD MAXIMUM.
3. TOTAL WEIGHT INCLUDES SELF-WEIGHT AND INTERIOR CONTENTS NOT EXCEEDING 33 LB/FT^3.
4. LIVE LOAD OF 1.5 LB/IN OF PERIMETER OF WORK SURFACE OR 200 LB. CONCENTRATED LOAD; WHICHEVER GOVERNS..

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SHEET 4 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
ERIC CHRISTIAN STOVNER
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STRUCTURAL
STATE OF CALIFORNIA

REVISIONS	DATE
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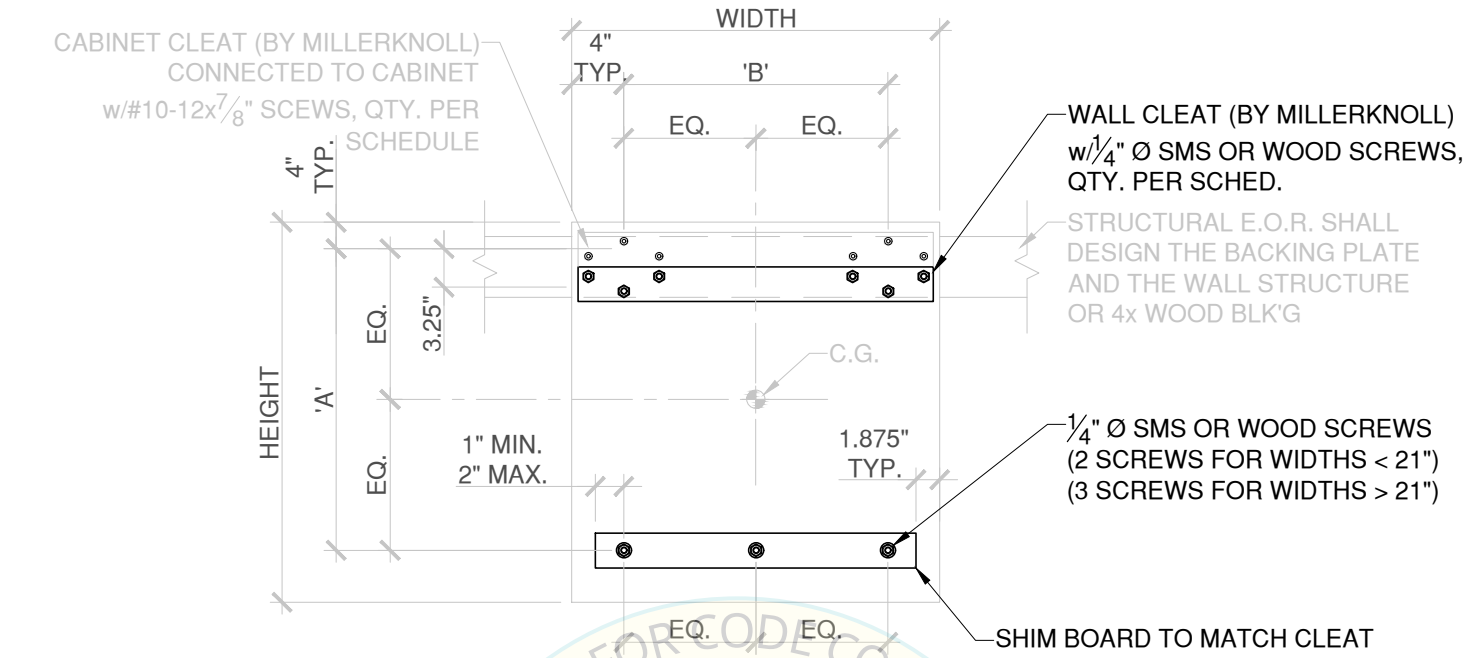
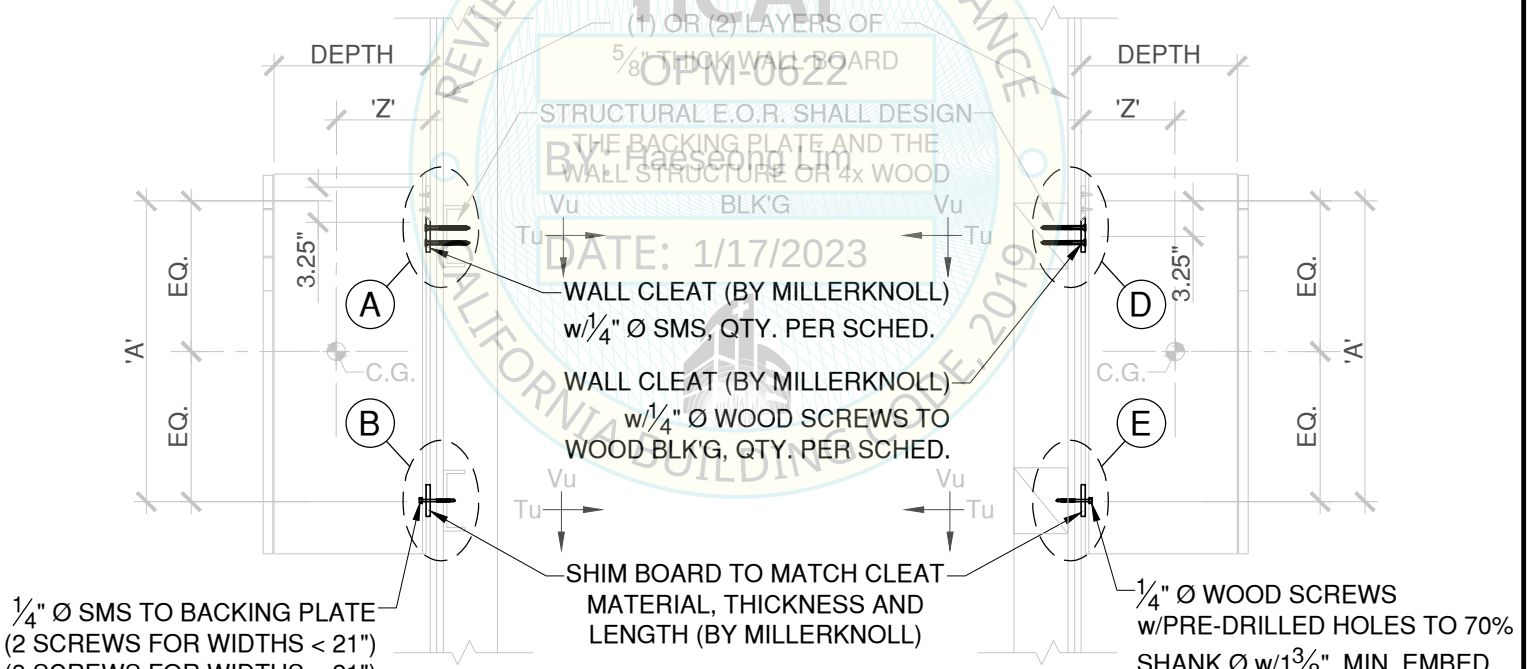


FRONT ELEVATION



SIDE ELEVATION

OVERHEAD CABINET
(CH300 / CH301 MODELS)

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SHEET 5 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

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OVERHEAD CABINET SCHEDULE[1]

MODEL NUMBER	DEPTH	WIDTH	HEIGHT	"A"	"B"	"Z"[2]	WEIGHT[3]	# OF TOP SCREWS	# OF BOTTOM SCREWS	E_h	E_v	SCREW FORCES (ASD)	
	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(LB)			(LB)	(LB)	T (LB/ SCREW)	V (LB/ SCREW)
CH300.191811C	10.875	18	18.5	10.5	9.7	6.75	103	5	2	148	41	47	24
CH300.191811G	10.875	18	18.5	10.5	9.7	6.75	105	5	2	150	42	48	24
CH300.191811P	10.875	18	18.5	10.5	9.7	6.75	95	5	2	136	38	43	22
CH300.191811S	10.875	18	18.5	10.5	9.7	6.75	100	5	2	143	40	45	23
CH300.192411C	10.875	24	18.5	10.5	13.0	6.75	132	6	3	189	53	49	24
CH300.192411G	10.875	24	18.5	10.5	13.0	6.75	135	6	3	193	54	50	24
CH300.192411P	10.875	24	18.5	10.5	13.0	6.75	124	6	3	178	50	46	22
CH300.192411S	10.875	24	18.5	10.5	13.0	6.75	130	6	3	186	52	49	24
CH300.193011D	10.875	30	18.5	10.5	17.0	6.75	163	6	3	234	65	57	29
CH300.193611D	10.875	36	18.5	10.5	23.0	6.75	194	8	3	278	78	51	29
CH300.194811D	10.875	48	18.5	10.5	34.0	6.75	257	9	3	368	103	59	35
CH300.311813P	12.875	18	30.5	22.5	9.7	7.75	181	5	2	259	72	60	42
CH300.311813S	12.875	18	30.5	22.5	9.7	7.75	183	5	2	262	73	61	42
CH300.312413P	13.000	24	30.5	22.5	13.0	7.75	237	6	3	339	95	61	43
CH300.312413S	12.875	24	30.5	22.5	13.0	7.75	239	6	3	342	96	62	43
CH300.313013D	12.875	30	30.5	22.5	17.0	7.75	297	6	3	425	119	65	54
CH300.313613D	12.875	36	30.5	22.5	23.0	7.75	353	8	3	505	141	57	52
CH300.314813D	12.875	48	30.5	22.5	34.0	7.75	471	9	3	674	188	66	64
CH301.193011A	10.875	30	18.5	10.5	17.0	6.75	140	6	3	201	56	49	25
CH301.193611A	10.875	36	18.5	10.5	23.0	6.75	163	8	3	234	65	43	24
CH301.194811A	10.875	48	18.5	10.5	34.0	6.75	209	9	3	300	84	48	28

1. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THESE CALCULATIONS ENCOMPASS ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
2. MAXIMUM DEPTH TO CENTER OF GRAVITY NOT TO EXCEED "Z" TABULATED ABOVE. (2) LAYERS OF 5/8" THICK WALL BOARD MAXIMUM.
3. TOTAL WEIGHT INCLUDES SELF-WEIGHT AND INTERIOR CONTENTS NOT EXCEEDING 33 LB/FT^3. MANUFACTURER SHALL PROVIDE PERMANENT PLAQUE TO BE AFFIXED ON THE UNIT STATING "CONTENT WEIGHT SHALL NOT EXCEED 33 LB/FT^3.

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SHEET 6 OF 25

MORA SYSTEM

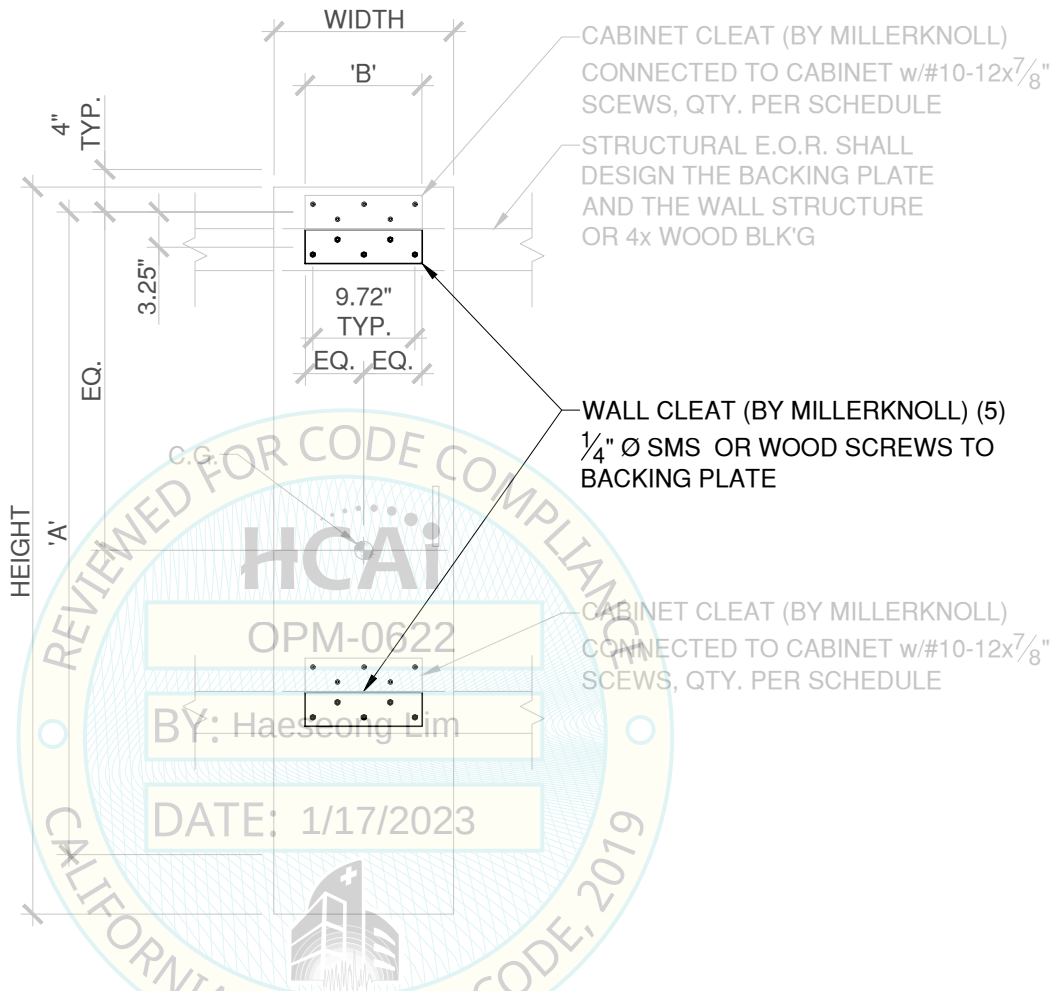
EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER ERIC CHRISTIAN STOVNER No. S 4204 STRUCTURAL STATE OF CALIFORNIA

REVISIONS	DATE
DATE: 2-3-2021	
PROJECT: 20-627	
ENGINEER: RO	
DRAFTER: MC	



FRONT ELEVATION

NOTE: $S_{DS} \leq 1.794$

TALL WALL CABINET

(CH400 / CH420 MODELS)

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SHEET 7 OF 25

MORA SYSTEM

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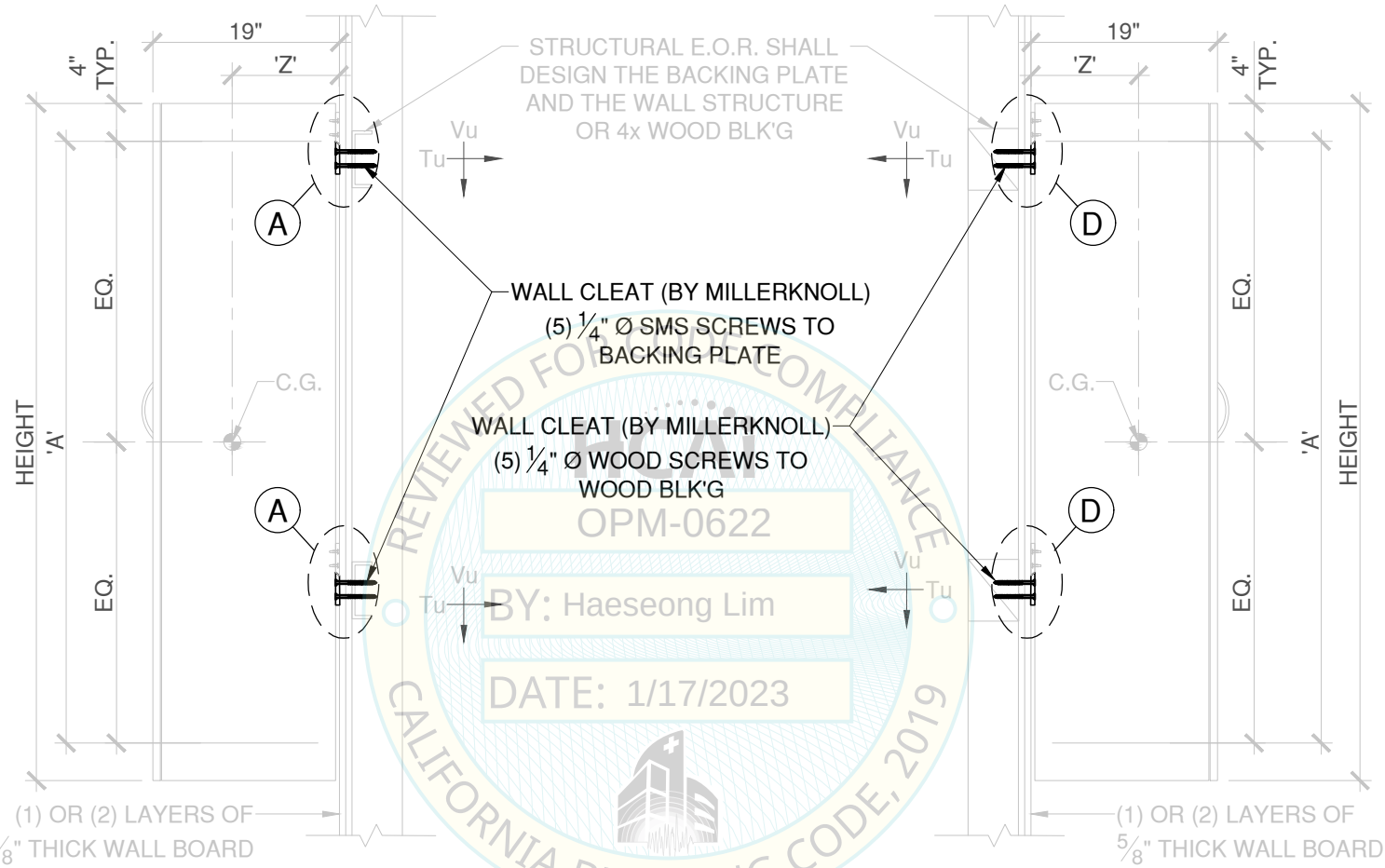

SIDE ELEVATION

NOTE: $S_{DS} \leq 1.794$

TALL WALL CABINET
(CH400 / CH420 MODELS)

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SHEET 8 OF 25

MORA SYSTEM

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TALL WALL CABINET SCHEDULE[1]

MODEL NUMBER	DEPTH (IN)	WIDTH (IN)	HEIGHT (IN)	"A" (IN)	"B" (IN)	"Z"[2] (IN)	WEIGHT[3] (LB)	# OF TOP SCREWS	# OF BOTTOM SCREWS	E_h (LB)	E_v (LB)	SCREW FORCES (ASD) T (LB/ SCREW)	SCREW FORCES (ASD) V (LB/ SCREW)
CH400.151966G	18.8	15	51.18	31.0	9.7	11	401	5	5	515	144	132	62
CH400.151966S	18.8	15	51.18	31.0	9.7	11	392	5	5	503	141	129	60
CH400.151966T	18.8	15	51.18	31.0	9.7	11	371	5	5	476	133	122	57
CH400.151974G	18.8	15	58.68	38.5	9.7	11	450	5	5	578	162	145	69
CH400.151974S	18.8	15	58.68	38.5	9.7	11	442	5	5	568	159	142	68
CH400.151974T	18.8	15	58.68	38.5	9.7	11	421	5	5	541	151	135	65
CH420.151966T	18.8	15	51.18	31.0	9.7	11	365	5	5	468	131	120	56
CH420.151974T	18.8	15	58.68	38.5	9.7	11	412	5	5	529	148	132	64

1. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THESE CALCULATIONS ENCOMPASS ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
2. MAXIMUM DEPTH TO CENTER OF GRAVITY NOT TO EXCEED "Z" TABULATED ABOVE. (2) LAYERS OF 5/8" THICK WALL BOARD MAXIMUM.
3. TOTAL WEIGHT INCLUDES SELF-WEIGHT AND INTERIOR CONTENTS NOT EXCEEDING 33 LB/FT^3.
4. $S_{DS} \leq 1.794$

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SHEET 9 OF 25

MORA SYSTEM

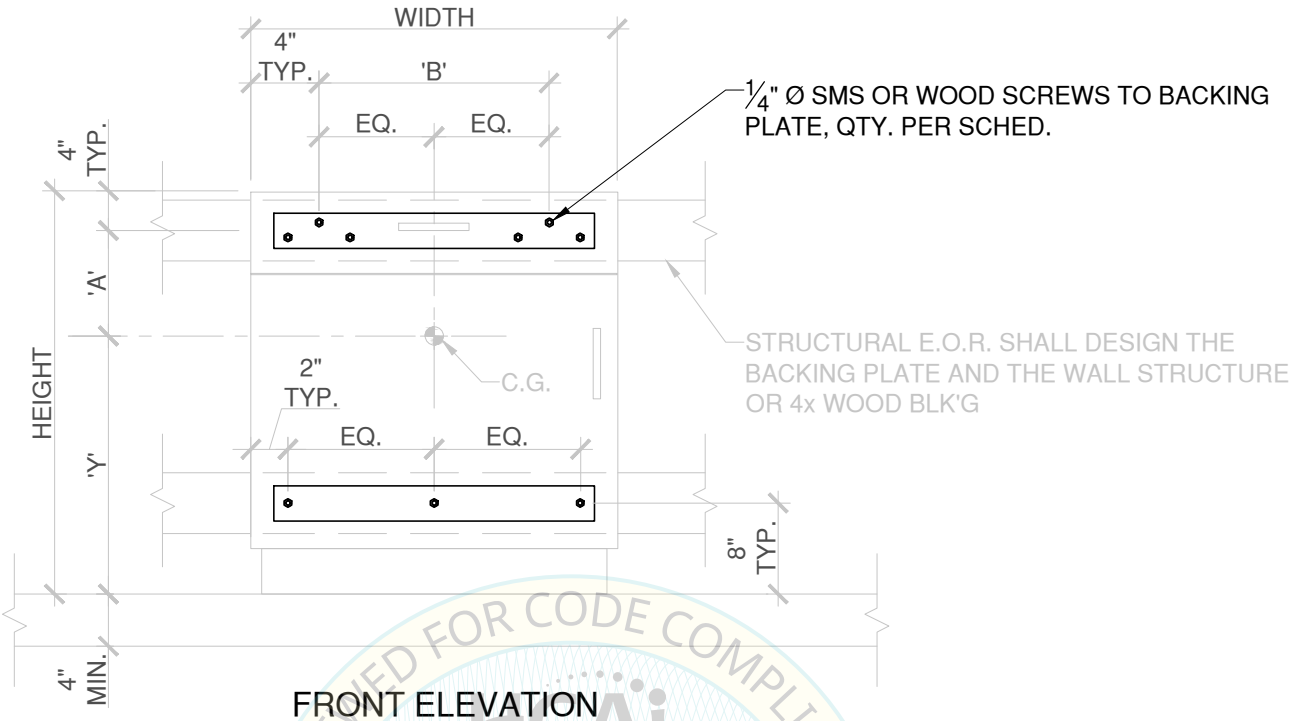
EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

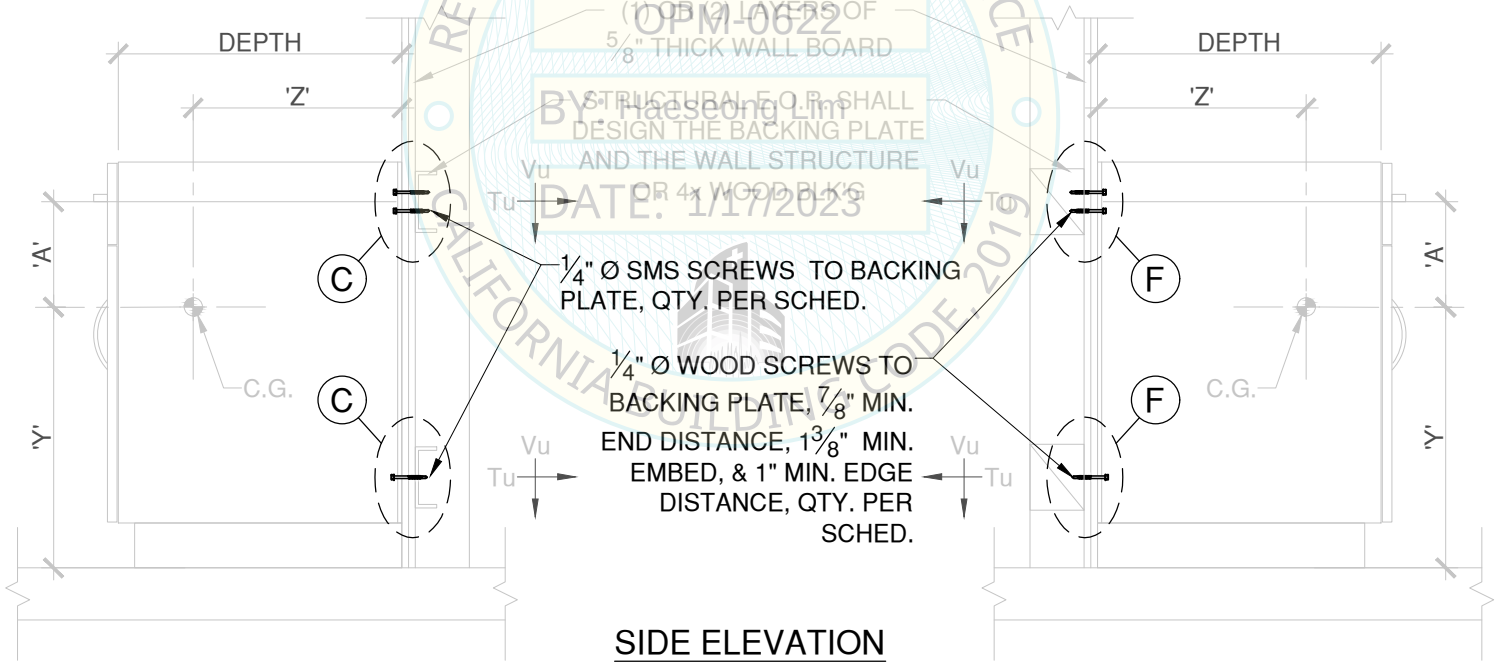
MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
ERIC CHRISTIANSTOVNER
No. S 4204
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS	DATE
DATE: 2-3-2021	
PROJECT: 20-627	
ENGINEER: RO	
DRAFTER: MC	



FRONT ELEVATION



SIDE ELEVATION

FLOOR CABINET
(CH220 MODELS)

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SHEET 10 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
ERIC CHRISTIAN STOVNER
No. S 4204
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS	DATE
DATE: 2-3-2021	
PROJECT: 20-627	
ENGINEER: RO	
DRAFTER: MC	

FLOOR CABINET SCHEDULE[1]

MODEL NUMBER	DEPTH	WIDTH	HEIGHT	"A"	"B"	"Y"	"Z"[2]	WEIGHT[3]	# OF TOP SCREWS	# OF MID/ BOTTOM SCREWS	E_h	E_v	SCREW FORCES (ASD)	
	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(LB)			(LB)	(LB)	T (LB/ SCREW)	V (LB/ SCREW)
CH220.361819SD	19.00	18	36	10.4	9.72	21.6	10.8	327	5	3	468	131	96	41
CH220.362419SD	19.00	24	36	10.4	12.72	21.6	10.8	423	6	4	604	169	61	42
CH220.363019SD	19.00	30	36	10.4	16.72	21.6	10.8	518	6	4	741	207	71	52
CH220.341819SD	19.00	18	34	9.6	9.72	20.4	10.8	308	5	3	441	123	90	39
CH220.342419SD	19.00	24	34	9.6	12.72	20.4	10.8	397	6	4	568	159	58	40
CH220.343019SD	19.00	30	34	9.6	16.72	20.4	10.8	487	6	4	697	195	67	49
CH220.361819FM	19.00	18	36	10.4	9.72	21.6	10.8	324	5	3	464	130	95	41
CH220.362419FM	19.00	24	36	10.4	12.72	21.6	10.8	420	6	4	600	168	61	42
CH220.363019FM	19.00	30	36	10.4	16.72	21.6	10.8	514	6	4	735	206	71	51
CH220.341819FM	19.00	18	34	9.6	9.72	20.4	10.8	304	5	3	435	122	89	38
CH220.342419FM	19.00	24	34	9.6	12.72	20.4	10.8	394	6	4	564	158	57	39
CH220.343019FM	19.00	30	34	9.6	16.72	20.4	10.8	483	6	4	691	193	67	48
CH220.361819SS	19.00	18	36	10.4	9.72	21.6	10.8	309	5	3	442	124	91	39
CH220.362419SS	19.00	24	36	10.4	12.72	21.6	10.8	404	6	4	577	161	58	40
CH220.363019SS	19.00	30	36	10.4	16.72	21.6	10.8	497	6	4	711	199	68	50
CH220.341819SS	19.00	18	34	9.6	9.72	20.4	10.8	294	5	3	421	118	86	37
CH220.342419SS	19.00	24	34	9.6	12.72	20.4	10.8	382	6	4	547	153	56	38
CH220.343019SS	19.00	30	34	9.6	16.72	20.4	10.8	471	6	4	674	188	65	47
CH220.361824SD	24.25	18	36	10.4	9.72	21.6	13.4	403	5	3	577	161	143	50
CH220.362424SD	24.25	24	36	10.4	12.72	21.6	13.4	521	6	4	745	208	87	52
CH220.363024SD	24.25	30	36	10.4	16.72	21.6	13.4	639	6	4	914	256	92	64
CH220.341824SD	24.25	18	34	9.6	9.72	20.4	13.4	379	5	3	543	152	135	47
CH220.342424SD	24.25	24	34	9.6	12.72	20.4	13.4	491	6	4	702	196	82	49
CH220.343024SD	24.25	30	34	9.6	16.72	20.4	13.4	602	6	4	862	241	87	60
CH220.361824FM	24.25	18	36	10.4	9.72	21.6	13.4	400	5	3	572	160	142	50
CH220.362424FM	24.25	24	36	10.4	12.72	21.6	13.4	518	6	4	741	207	86	52
CH220.363024FM	24.25	30	36	10.4	16.72	21.6	13.4	636	6	4	910	254	91	64
CH220.341824FM	24.25	18	34	9.6	9.72	20.4	13.4	375	5	3	537	150	133	47
CH220.342424FM	24.25	24	34	9.6	12.72	20.4	13.4	487	6	4	696	195	81	49
CH220.343024FM	24.25	30	34	9.6	16.72	20.4	13.4	59	6	4	856	239	86	60
CH220.361824SS	24.25	18	36	10.4	9.72	21.6	13.4	387	5	3	554	155	137	48
CH220.362424SS	24.25	24	36	10.4	12.72	21.6	13.4	504	6	4	721	202	84	50
CH220.363024SS	24.25	30	36	10.4	16.72	21.6	13.4	621	6	4	889	248	89	62
CH220.341824SS	24.25	18	34	9.6	9.72	20.4	13.4	366	5	3	524	147	130	46
CH220.342424SS	24.25	24	34	9.6	12.72	20.4	13.4	478	6	4	684	191	80	48
CH220.343024SS	24.25	30	34	9.6	16.72	20.4	13.4	589	6	4	843	236	85	59
CH220.362419PC	19.00	24	36	10.4	12.72	21.6	10.8	403	6	4	576	161	58	40
CH220.362424PC	24.25	24	36	10.4	12.72	21.6	13.4	504	6	4	721	202	84	50
CH220.342419PC	19.00	24	34	9.6	12.72	20.4	10.8	377	6	4	539	151	55	38
CH220.342424PC	24.25	24	34	9.6	12.72	20.4	13.4	473	6	4	676	189	79	47
CH220.363019DR	19.00	30	36	10.4	16.72	21.6	10.8	500	6	4	715	200	69	50
CH220.363024DR	24.25	30	36	10.4	16.72	21.6	13.4	624	6	4	893	250	89	62
CH220.343019DR	19.00	30	34	9.6	16.72	20.4	10.8	475	6	4	680	190	66	48
CH220.343024DR	24.25	30	34	9.6	16.72	20.4	13.4	592	6	4	847	237	85	59

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SHEET 11 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER ERIC CHRISTIANSTOVNER No. S 4204 STRUCTURAL STATE OF CALIFORNIA

REVISIONS	DATE
DATE: 2-3-2021	
PROJECT: 20-627	
ENGINEER: RO	
DRAFTER: MC	

FLOOR CABINET SCHEDULE[1]

MODEL NUMBER	DEPTH	WIDTH	HEIGHT	"A"	"B"	"Y"	"Z"[2]	WEIGHT[3]	# OF TOP SCREWS	# OF MID/ BOTTOM SCREWS	E_h	E_v	SCREW FORCES (ASD)	
	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(LB)			(LB)	(LB)	T (LB/ SCREW)	V (LB/ SCREW)
CH220.341830	30	18	34	15.25	9.72	14.75	16.3	479	5	6	686	192	124	44
CH220.342430	30	24	34	15.25	12.72	14.75	16.3	603	6	6	863	241	96	50
CH220.343030	30	30	34	15.25	16.72	14.75	16.3	738	6	6	1056	295	94	62
CH220.343630	30	36	34	15.25	23.22	14.75	16.3	864	8	8	1236	346	78	54
CH220.361830	30	18	36	15.25	9.72	16.75	16.3	508	5	6	727	203	132	46
CH220.362430	30	24	36	15.25	12.72	16.75	16.3	642	6	6	918	257	103	54
CH220.363030	30	30	36	15.25	16.72	16.75	16.3	785	6	6	1123	314	102	65
CH220.363630	30	36	36	15.25	23.22	16.75	16.3	912	8	8	1304	365	84	57
CH230.361819DS	19	18	36	10.4	9.72	21.6	10.8	302	5	3	432	121	88	38
CH230.362419DS	19	24	36	10.4	12.72	21.6	10.8	396	6	4	566	158	57	40
CH230.361819TC	19	18	36	10.4	9.72	21.6	10.8	299	5	3	428	120	88	37
CH230.362419TC	19	24	36	10.4	12.72	21.6	10.8	391	6	4	559	156	56	39
CH230.361819DF	19	18	36	10.4	9.72	21.6	10.8	303	5	3	434	121	89	38
CH230.362419DF	19	24	36	10.4	12.72	21.6	10.8	397	6	4	567	159	57	40
CH230.341819DS	19	18	34	9.6	9.72	20.4	10.8	287	5	3	411	115	84	36
CH230.342419DS	19	24	34	9.6	12.72	20.4	10.8	374	6	4	535	150	54	37
CH230.341819TC	19	18	34	9.6	9.72	20.4	10.8	284	5	3	406	114	83	36
CH230.342419TC	19	24	34	9.6	12.72	20.4	10.8	370	6	4	529	148	54	37
CH230.341819DF	19	18	34	9.6	9.72	20.4	10.8	288	5	3	412	115	84	36
CH230.342419DF	19	24	34	9.6	12.72	20.4	10.8	375	6	4	537	150	55	38
CH230.363019DD	19	30	36	10.4	16.72	21.6	10.8	489	6	4	699	196	67	49
CH230.363019FD	19	30	36	10.4	16.72	21.6	10.8	492	6	4	704	197	68	49
CH230.363619DD	19	36	36	10.4	23.22	21.6	10.8	587	8	6	840	235	59	42
CH230.363619FD	19	36	36	10.4	23.22	21.6	10.8	587	8	6	840	235	59	42
CH230.343019DD	19	30	34	9.6	16.72	20.4	10.8	464	6	4	664	186	64	46
CH230.343019FD	19	30	34	9.6	16.72	20.4	10.8	467	6	4	668	187	65	47
CH230.343619DD	19	36	34	9.6	23.22	20.4	10.8	554	8	6	793	222	56	40
CH230.343619FD	19	36	34	9.6	23.22	20.4	10.8	557	8	6	797	223	57	40
CH230.341830	30	18	34	15.25	9.72	14.75	16.3	456	5	6	652	182	118	42
CH230.342430	30	24	34	15.25	12.72	14.75	16.3	580	6	6	830	232	92	48
CH230.343030	30	30	34	15.25	16.72	14.75	16.3	714	6	6	1022	286	91	60
CH230.343630	30	36	34	15.25	23.22	14.75	16.3	850	8	8	1217	340	77	53
CH230.344830	30	48	34	15.25	34.22	14.75	16.3	1119	9	8	1600	448	79	66
CH230.361830	30	18	36	15.25	9.72	16.75	16.3	481	5	6	688	193	125	44
CH230.362430	30	24	36	15.25	12.72	16.75	16.3	613	6	6	877	245	98	51
CH230.363030	30	30	36	15.25	16.72	16.75	16.3	754	6	6	1079	302	98	63
CH230.363630	30	36	36	15.25	23.22	16.75	16.3	908	8	8	1299	363	83	57
CH230.364830	30	48	36	15.25	34.22	16.75	16.3	1181	9	9	1690	473	87	66

1. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THESE CALCULATIONS ENCOMPASS ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
2. MAXIMUM DEPTH TO CENTER OF GRAVITY NOT TO EXCEED "Z" TABULATED ABOVE. (2) LAYERS OF 5/8" THICK WALL BOARD MAXIMUM.
3. TOTAL WEIGHT INCLUDES SELF-WEIGHT AND INTERIOR CONTENTS NOT EXCEEDING 33 LB/FT^3.

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SHEET 12 OF 25

MORA SYSTEM

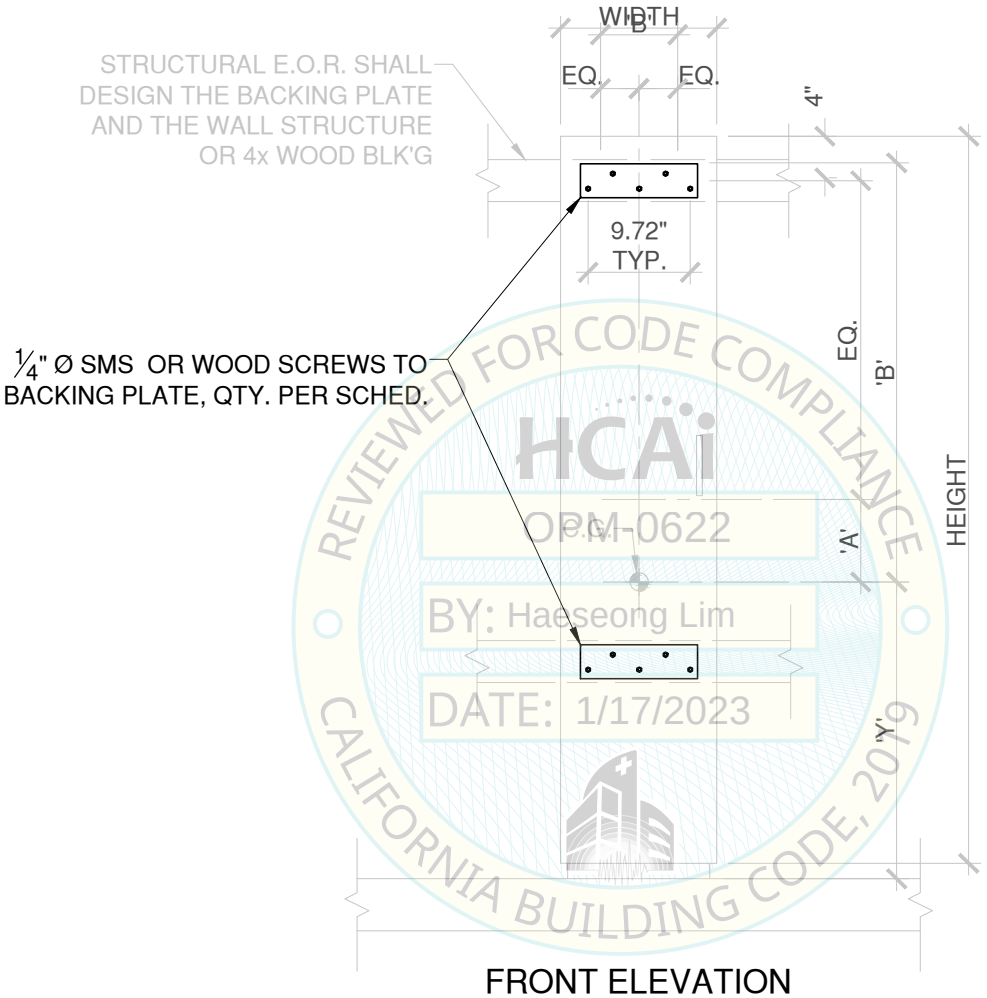
EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
ERIC CHRISTIANSTOVNER
No. S 4204
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS	DATE
DATE: 2-3-2021	
PROJECT: 20-627	
ENGINEER: RO	
DRAFTER: MC	



FRONT ELEVATION

TALL FLOOR CABINET
(CH405 / CH415 MODELS)

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SHEET 13 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
ERIC CHRISTIANSTOVNER
No. S 4204
STRUCTURAL
STATE OF CALIFORNIA

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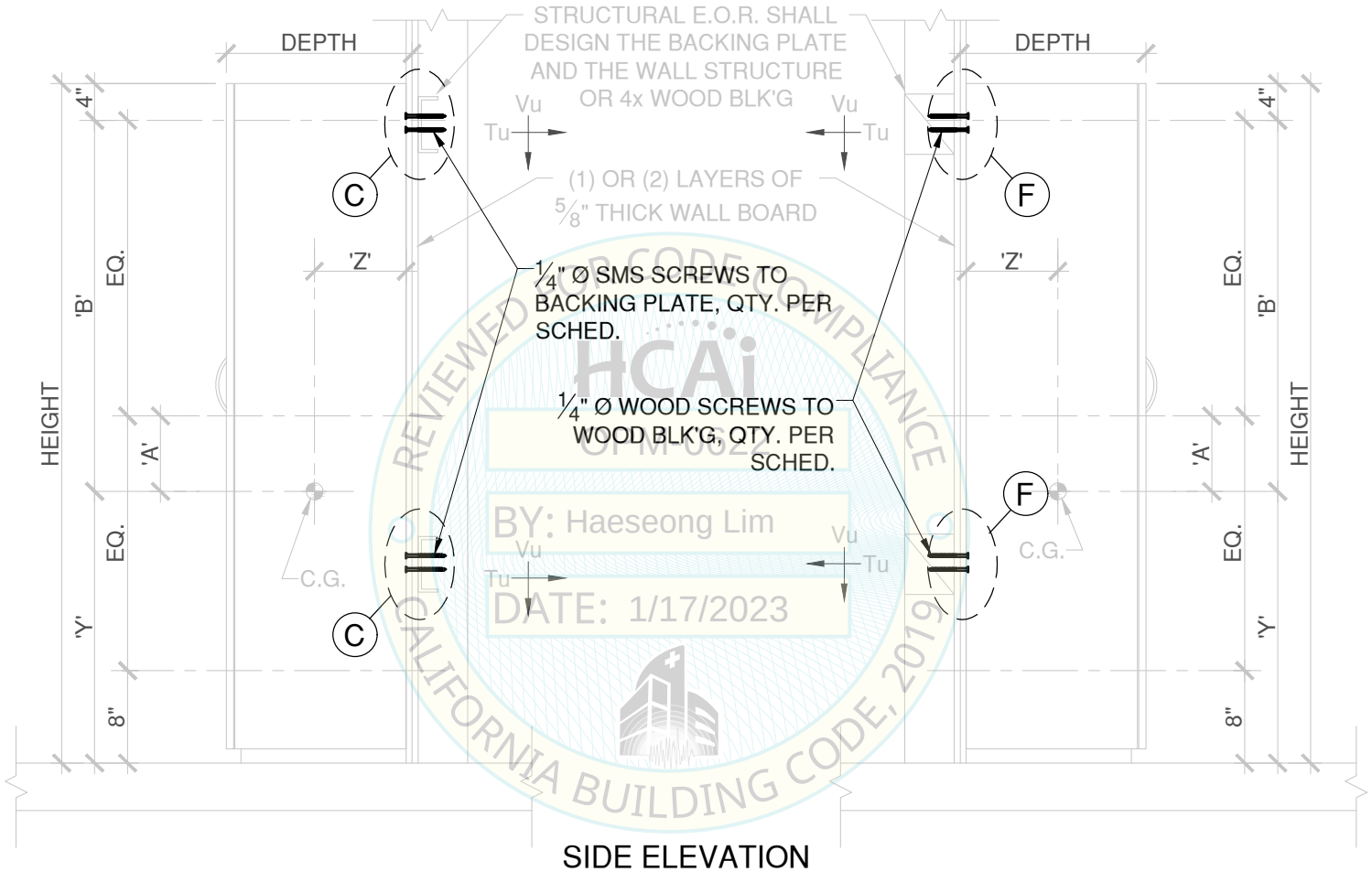
DRAFTER: MC	



SIDE ELEVATION

TALL FLOOR CABINET
(CH405 / CH415 MODELS)

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SHEET 14 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
ERIC CHRISTIANSTOVNER
No. S 4204
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS	DATE
DATE: 2-3-2021	
PROJECT: 20-627	
ENGINEER: RO	
DRAFTER: MC	

TALL FLOOR CABINET SCHEDULE[1]

MODEL NUMBER	DEPTH (IN)	WIDTH (IN)	HEIGHT (IN)	"A" (IN)	"B" (IN)	"Y" (IN)	"Z"[2] (IN)	WEIGHT[3] (LB)	# OF TOP SCREWS	# OF BOTTOM SCREWS	E_h (LB)	E_v (LB)	SCREW FORCES (ASD) T (LB/ SCREW)	SCREW FORCES (ASD) V (LB/ SCREW)
CH405.151966C	18.76	15	62	31.0	7	27.9	11.0	457	5	3	654	183	192	57
CH405.151966G	18.76	15	62	31.0	7	27.9	11.0	495	5	3	708	198	208	62
CH405.151966S	18.76	15	62	31.0	7	27.9	11.0	482	5	3	690	193	203	60
CH405.151966T	18.76	15	62	31.0	7	27.9	11.0	444	5	3	635	178	187	56
CH405.151974C	18.76	15	70	38.5	7	31.5	11.0	509	5	3	728	204	214	64
CH405.151974G	18.76	15	70	38.5	7	31.5	11.0	547	5	3	783	219	230	68
CH405.151974S	18.76	15	70	38.5	7	31.5	11.0	535	5	3	766	214	225	67
CH405.151974T	18.76	15	70	38.5	7	31.5	11.0	497	5	3	711	199	209	62
CH405.241966	18.76	24	62	31.0	16	27.9	11.0	654	6	5	936	262	127	60
CH405.242466	24.00	24	62	31.0	16	27.9	13.5	803	6	6	1149	321	188	67
CH405.241974	18.76	24	70	38.5	16	31.5	11.0	723	6	5	1034	289	141	66
CH405.242474	24.00	24	70	38.5	16	31.5	13.5	891	6	7	1274	356	208	69
CH415.151978G	18.76	15	74	38.5	7	33.3	11.0	556	5	4	795	222	234	62

1. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THESE CALCULATIONS ENCOMPASS ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
2. MAXIMUM DEPTH TO CENTER OF GRAVITY NOT TO EXCEED "Z" TABULATED ABOVE. (2) LAYERS OF 5/8" THICK WALL BOARD MAXIMUM.
3. TOTAL WEIGHT INCLUDES SELF-WEIGHT AND INTERIOR CONTENTS NOT EXCEEDING 33 LB/FT^3.
4. LIVE LOAD OF 1.5 LB/IN OF PERIMETER OF WORK SURFACE OR 200 LB CONCENTRATED LOAD; WHICHEVER GOVERNS.

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SHEET 15 OF 25

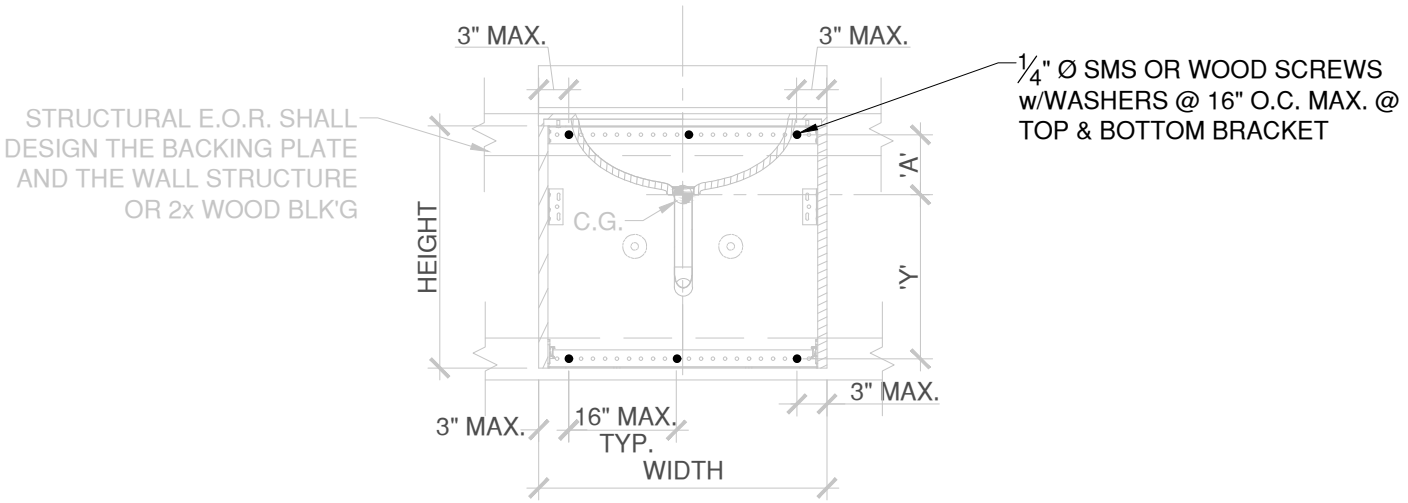
MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

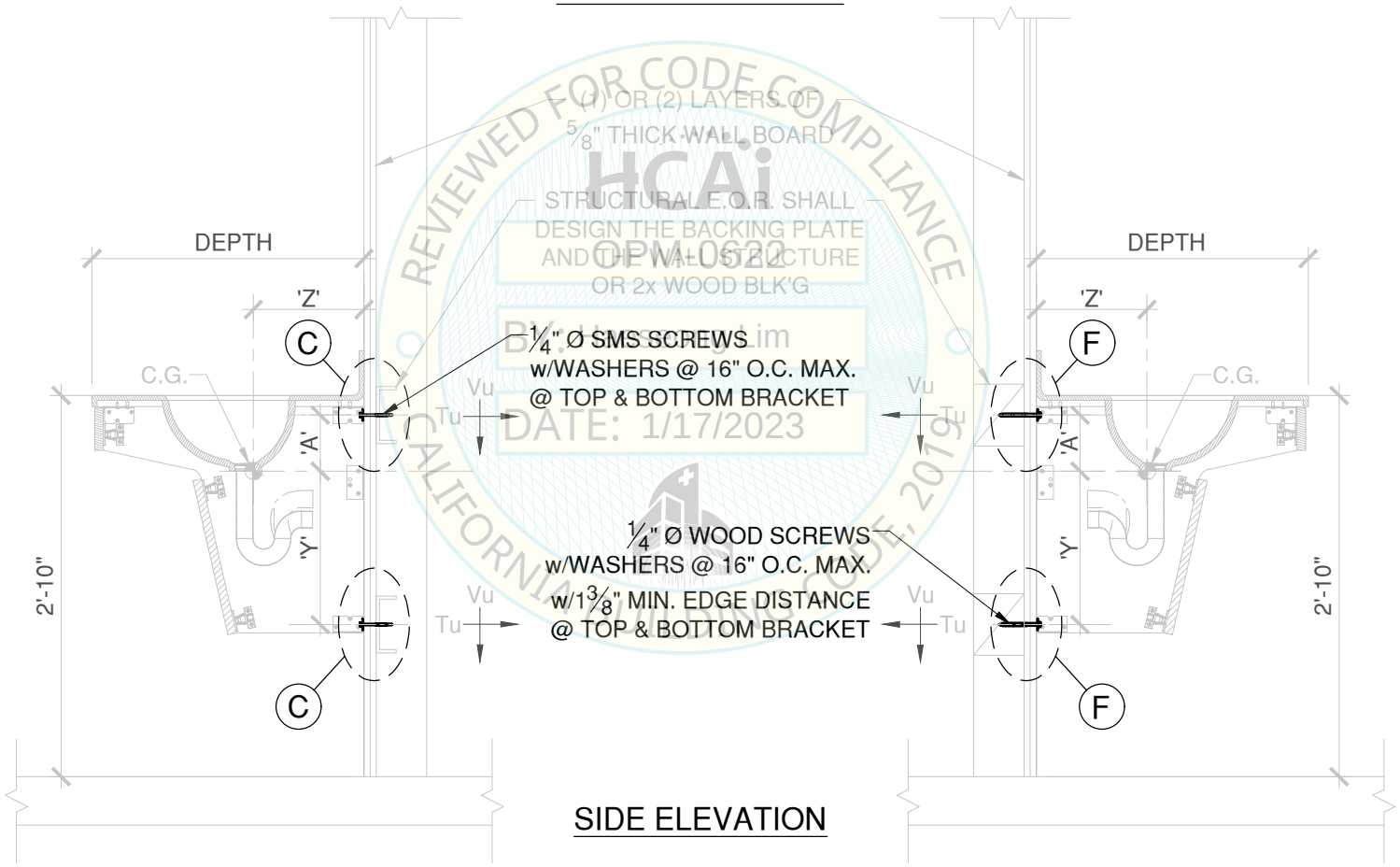
EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REVISIONS	DATE
DATE: 2-3-2021	
PROJECT: 20-627	
ENGINEER: RO	
DRAFTER: MC	



FRONT ELEVATION



SIDE ELEVATION

ADA SINK
(CH607 MODELS)

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SHEET 16 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
ERIC CHRISTIANSTOVNER
No. S 4204
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS	DATE
DATE: 2-3-2021	
PROJECT: 20-627	
ENGINEER: RO	
DRAFTER: MC	

ADA SINK CABINET SCHEDULE[1]

MODEL NUMBER	DEPTH	WIDTH	HEIGHT	"A"	"B"	"Y"	"Z"[2]	WEIGHT[3]	LIVE LOAD[4]	# OF TOP SCREWS	# OF BOTTOM SCREWS	E_h	E_v	SCREW FORCES (ASD)	
	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(LB)	(LB)			(LB)	(LB)	T (LB/ SCREW)	V (LB/ SCREW)
CH607.1924	19	24	21	8.8	16	10.6	9.7	78	200	2	2	112	31	82	63
CH607.1930	19	30	21	8.9	22	10.4	9.9	85	200	2	2	122	34	86	65
CH607.1936	19	36	21	9.1	28	10.3	10.1	110	200	3	3	157	44	68	49
CH607.1942	19	42	21	9.2	34	10.2	10.2	130	200	3	3	186	52	76	54
CH607.1948	19	48	21	9.3	40	10.1	10.4	157	200	3	3	225	63	86	60
CH607.1954	19	54	21	9.3	46	10.0	10.5	163	200	4	4	233	65	69	48
CH607.1960	19	60	21	9.4	52	9.9	10.6	169	200	4	4	242	68	72	50
CH607.1966	19	66	21	9.5	58	9.9	10.6	180	200	5	5	257	72	63	43
CH607.1972	19	72	21	9.5	64	9.8	10.7	200	200	5	5	286	80	69	47
CH607.2424	24	24	21	8.9	16	10.5	12.8	84	200	2	2	120	34	108	65
CH607.2430	24	30	21	9.0	22	10.3	13.1	91	200	2	2	130	36	113	67
CH607.2436	24	36	21	9.1	28	10.2	13.5	117	200	3	3	167	47	90	51
CH607.2442	24	42	21	9.2	34	10.1	13.7	138	200	3	3	197	55	99	56
CH607.2448	24	48	21	9.3	40	10.1	14.0	164	200	3	3	235	66	115	63
CH607.2454	24	54	21	9.3	46	10.0	14.2	170	200	4	4	243	68	92	50
CH607.2460	24	60	21	9.4	52	9.9	14.4	175	200	4	4	250	70	97	53
CH607.2466	24	66	21	9.4	58	9.9	14.5	187	200	5	5	267	75	84	45
CH607.2472	24	72	21	9.5	64	9.8	14.6	208	200	5	5	298	83	92	49

1. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THESE CALCULATIONS ENCOMPASS ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
2. MAXIMUM DEPTH TO CENTER OF GRAVITY NOT TO EXCEED "Z" TABULATED ABOVE. (2) LAYERS OF 5/8" THICK WALL BOARD MAXIMUM.
3. TOTAL WEIGHT INCLUDES SELF-WEIGHT ONLY.
4. LIVE LOAD OF 1.5 LB/IN OF PERIMETER OF WORK SURFACE OR 200 LB CONCENTRATED LOAD; WHICHEVER GOVERNS.

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SHEET 17 OF 25

MORA SYSTEM

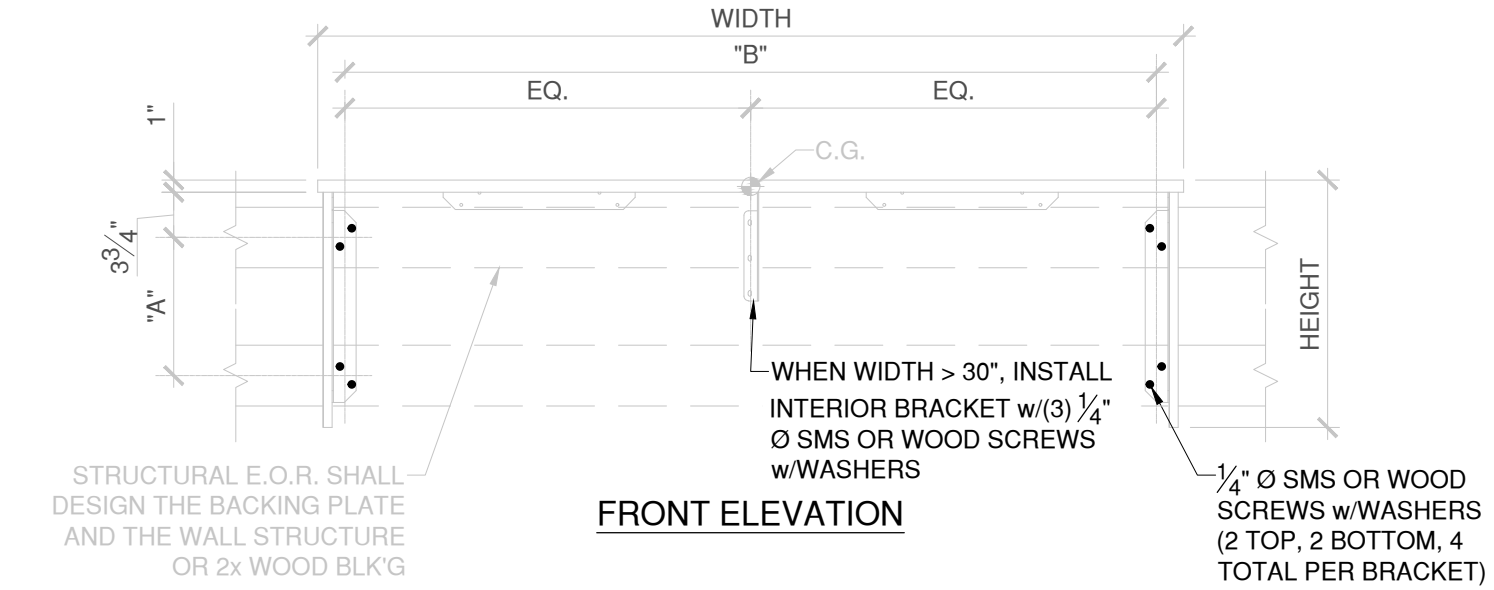
EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

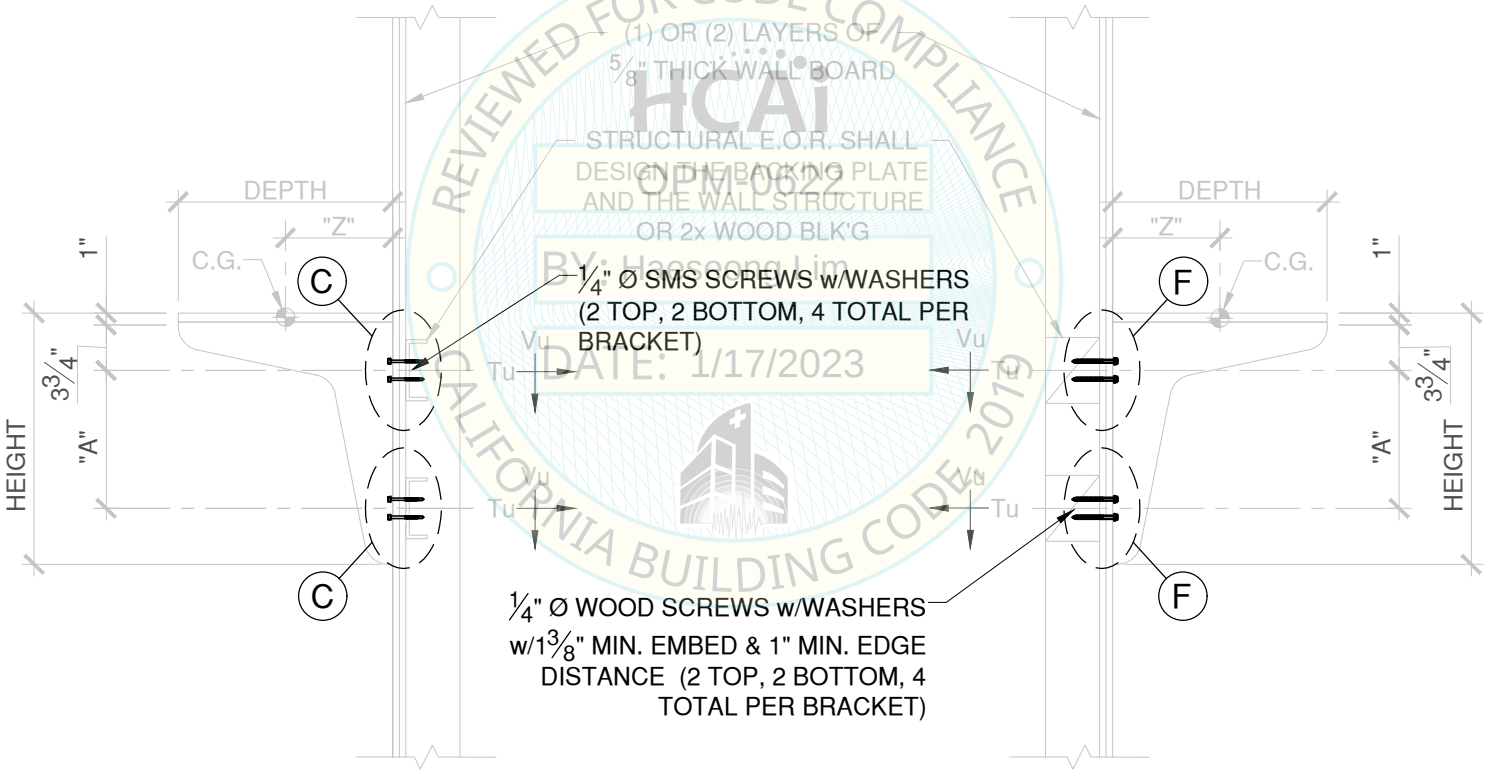
MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER ERIC CHRISTIAN STOVNER No. S 4204 STRUCTURAL STATE OF CALIFORNIA

REVISIONS	DATE
DATE: 2-3-2021	
PROJECT: 20-627	
ENGINEER: RO	
DRAFTER: MC	



FRONT ELEVATION



SIDE ELEVATION

CANTILEVER WORK SURFACE
(CH600 / CH620 MODELS)

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SHEET 18 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
ERIC CHRISTIANSTOVNER
No. S 4204
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS	DATE
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PROJECT: 20-627	
ENGINEER: RO	
DRAFTER: MC	

CANTILEVERED WORK SURFACE SCHEDULE[1]

MODEL NUMBER	DEPTH	WIDTH	HEIGHT	"A"	"B"	"Z"[2]	WEIGHT[3]	LIVE LOAD[4]	# OF TOP/ BOTTOM SCREWS	E_h	E_v	SCREW FORCES (ASD)	
	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(LB)	(LB)		(LB)	(LB)	T (LB/SCREW)	V (LB/SCREW)
CH600.2418	24	18	21.125	11.5	31.47	13.25	52.4	200	4	75	21	78	27
CH600.2424	24	24	21.125	11.5	19.47	13.25	69.8	200	4	100	28	88	30
CH600.2430	24	30	21.125	11.5	25.47	13.25	87.3	200	4	125	35	99	33
CH600.2436	24	36	21.125	11.5	31.47	13.25	104.8	200	4	150	42	109	26
CH600.2442	24	42	21.125	11.5	37.47	13.25	122.2	200	4	175	49	120	28
CH600.2448	24	48	21.125	11.5	43.47	13.25	139.7	216	4	200	56	134	32
CH600.2454	24	54	21.125	11.5	49.47	13.25	157.1	234	4	225	63	148	35
CH600.2460	24	60	21.125	11.5	55.47	13.25	174.6	252	4	250	70	163	38
CH600.2466	24	66	21.125	11.5	61.47	13.25	192.0	270	4	275	77	177	42
CH600.2472	24	72	21.125	11.5	67.47	13.25	209.5	288	4	300	84	191	45
CH600.1818	18	18	21.125	11.5	31.47	10.25	39.3	200	4	56	16	56	25
CH600.1824	18	24	21.125	11.5	19.47	10.25	52.4	200	4	75	21	63	27
CH600.1830	18	30	21.125	11.5	25.47	10.25	65.6	200	4	94	26	69	29
CH600.1836	18	36	21.125	11.5	31.47	10.25	78.6	200	4	112	31	76	23
CH600.1842	18	42	21.125	11.5	37.47	10.25	91.7	200	4	131	37	83	25
CH600.1848	18	48	21.125	11.5	43.47	10.25	104.8	200	4	150	42	90	26
CH600.1854	18	54	21.125	11.5	49.47	10.25	117.8	216	4	169	47	100	29
CH600.1860	18	60	21.125	11.5	55.47	10.25	130.9	234	4	187	52	109	32
CH600.1866	18	66	21.125	11.5	61.47	10.25	144.0	252	4	206	58	119	34
CH600.1872	18	72	21.125	11.5	67.47	10.25	157.1	270	4	225	63	129	37
CH620.2418	24	18	21.125	11.5	31.47	13.25	13.5	200	4	19	5	52	21
CH620.2424	24	24	21.125	11.5	19.47	13.25	17.9	200	4	26	7	55	22
CH620.2430	24	30	21.125	11.5	25.47	13.25	22.4	200	4	32	9	57	22
CH620.2436	24	36	21.125	11.5	31.47	13.25	26.9	200	4	39	11	60	17
CH620.2442	24	42	21.125	11.5	37.47	13.25	31.4	200	4	45	13	63	17
CH620.2448	24	48	21.125	11.5	43.47	13.25	35.9	216	4	51	14	69	19
CH620.2454	24	54	21.125	11.5	49.47	13.25	40.4	234	4	58	16	76	21
CH620.2460	24	60	21.125	11.5	55.47	13.25	44.9	252	4	64	18	82	22
CH620.2466	24	66	21.125	11.5	61.47	13.25	49.4	270	4	71	20	89	24
CH620.2472	24	72	21.125	11.5	67.47	13.25	53.8	288	4	77	22	95	26
CH620.1818	18	18	21.125	11.5	31.47	10.25	10.1	200	4	14	4	39	20
CH620.1824	18	24	21.125	11.5	19.47	10.25	13.5	200	4	19	5	41	21
CH620.1830	18	30	21.125	11.5	25.47	10.25	16.8	200	4	24	7	43	21
CH620.1836	18	36	21.125	11.5	31.47	10.25	20.2	200	4	29	8	44	16
CH620.1842	18	42	21.125	11.5	37.47	10.25	23.6	200	4	34	9	46	16
CH620.1848	18	48	21.125	11.5	43.47	10.25	26.9	200	4	39	11	48	17
CH620.1854	18	54	21.125	11.5	49.47	10.25	30.3	216	4	43	12	52	18
CH620.1860	18	60	21.125	11.5	55.47	10.25	33.7	234	4	48	13	57	20
CH620.1866	18	66	21.125	11.5	61.47	10.25	37.0	252	4	53	15	62	21
CH620.1872	18	72	21.125	11.5	67.47	10.25	40.4	270	4	58	16	67	23

1. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THESE CALCULATIONS ENCOMPASS ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
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SHEET 19 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
ERIC CHRISTIANSTOVNER
No. S 4204
STRUCTURAL
STATE OF CALIFORNIA

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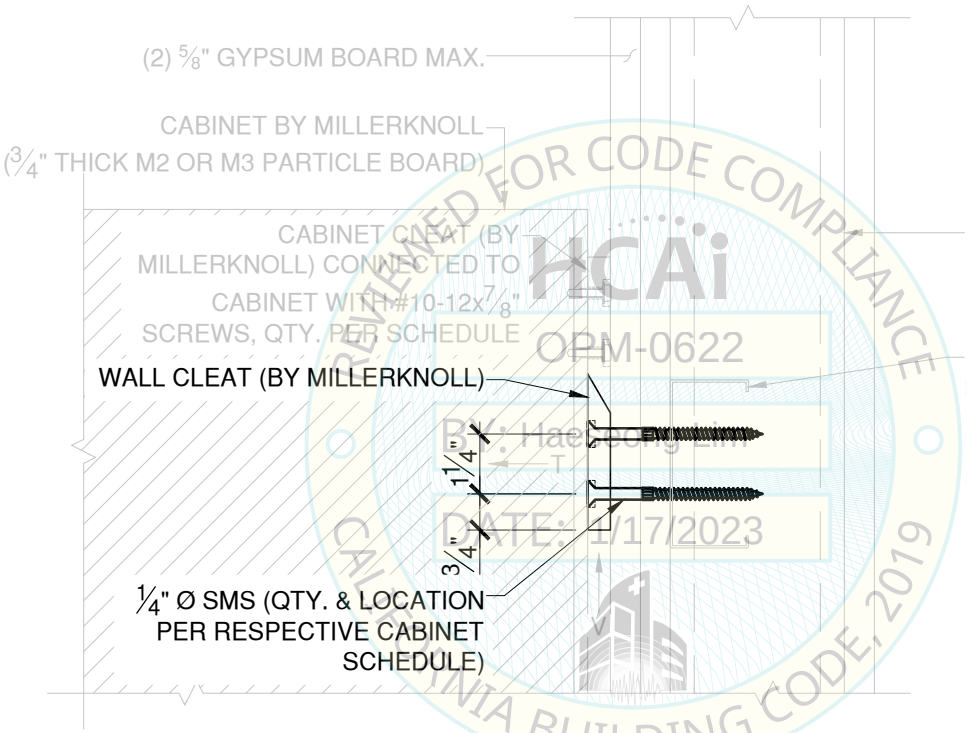
DRAFTER: MC	



TYPICAL CABINET SUPPORTS AND ATTACHMENT INTO CFS-STUD FRAMED WALL

A

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SHEET 20 OF 25

MORA SYSTEM
EQUIPMENT MANUFACTURER: MILLERKNOLL
EQUIPMENT TYPE: MORA CASEWORK
MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

REGISTERED PROFESSIONAL ENGINEER
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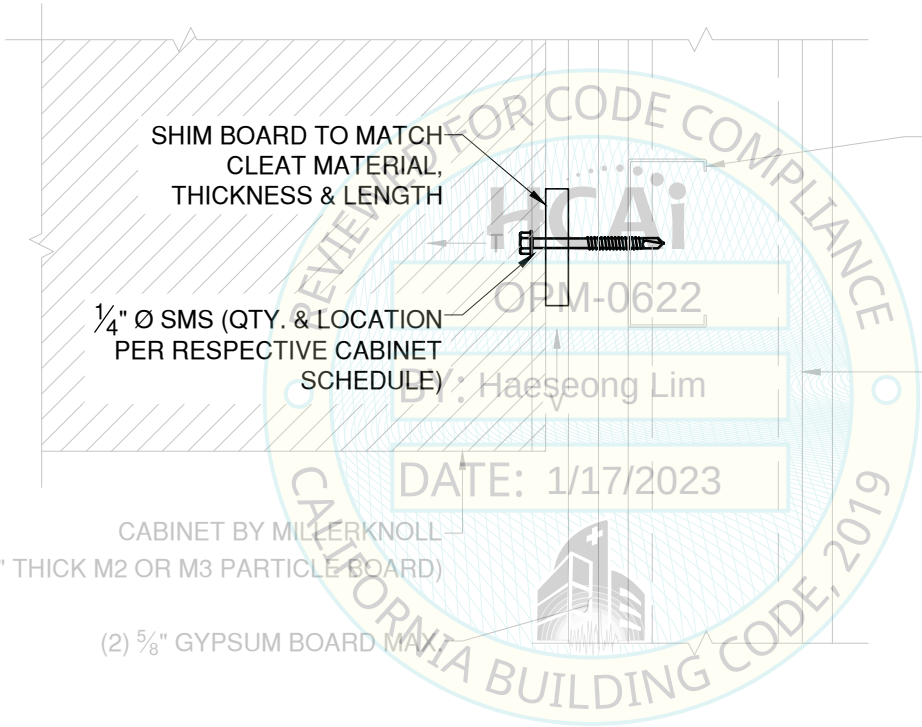

TYPICAL CABINET SUPPORTS AND ATTACHMENTS INTO CFS-STUD FRAMED WALL

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SHEET 21 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

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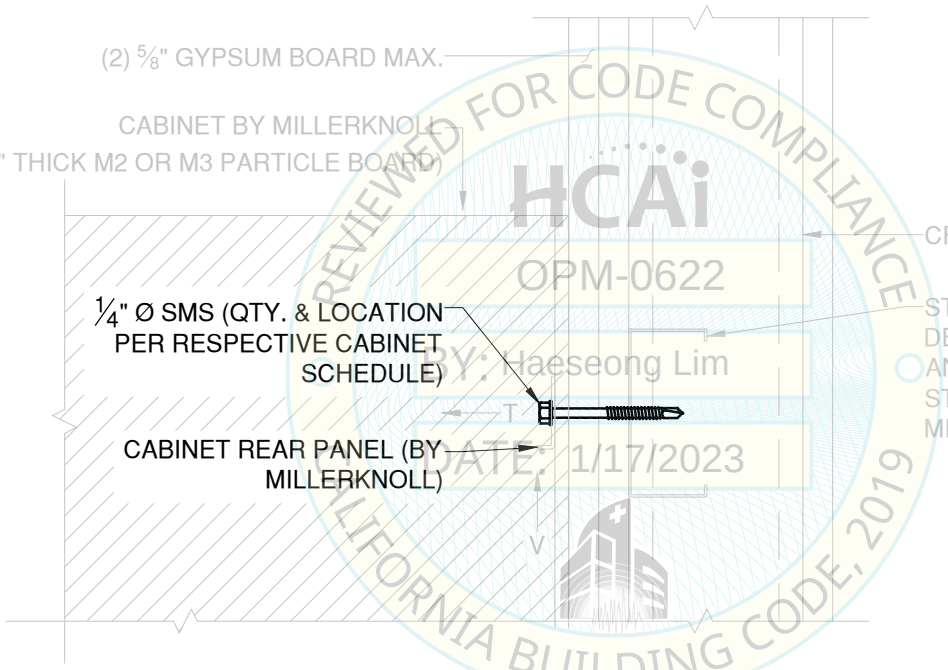

TYPICAL CABINETDUPPORTS AND ATTACHMENTS INTO CFS-STUD FRAMED WALL

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SHEET 22 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

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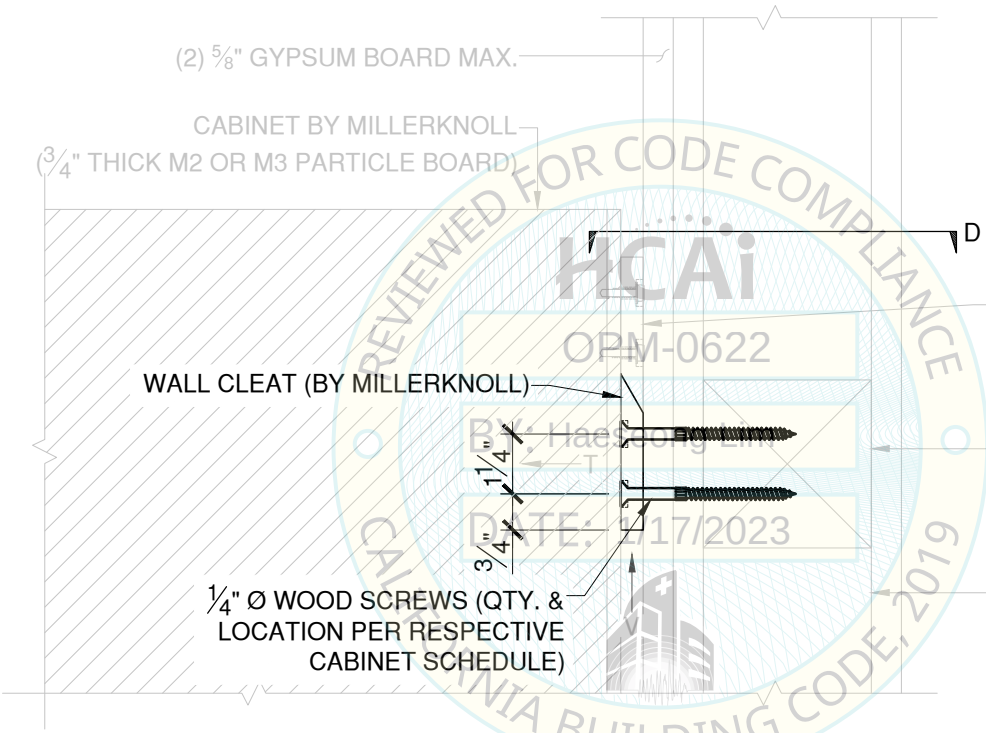

TYPICAL CABINET SUPPORTS AND ATTACHMENTS INTO WOOD STUD FRAMED WALL

D

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SHEET 23 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

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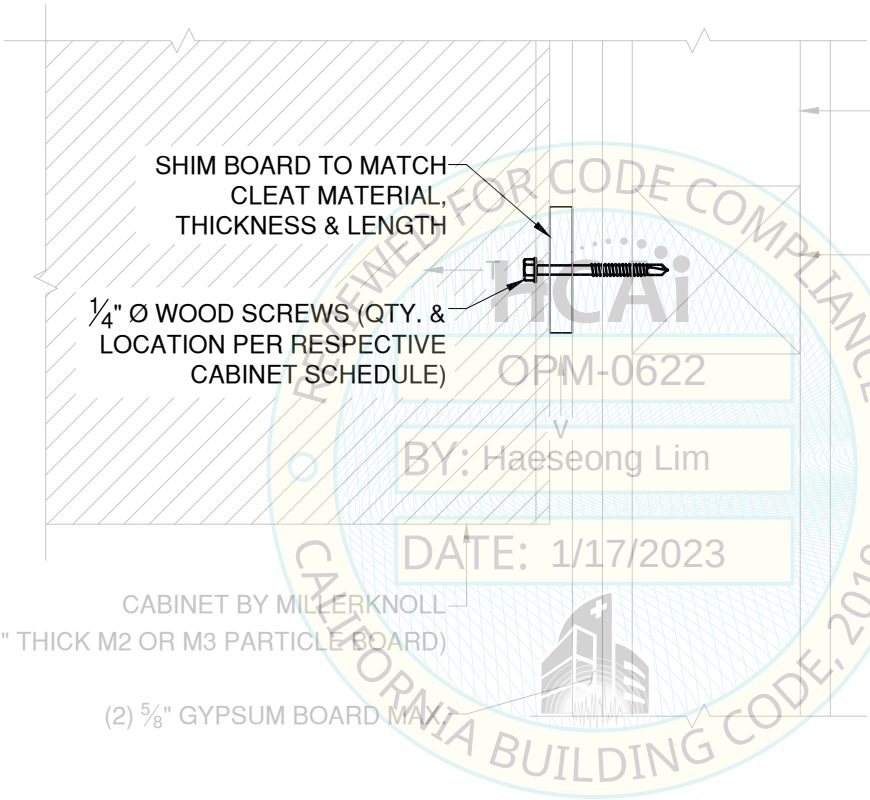
DRAFTER: MC	



TYPICAL CABINET SUPPORTS AND ATTACHMENTS INTO WOOD STUD FRAMED WALL

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SHEET 24 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

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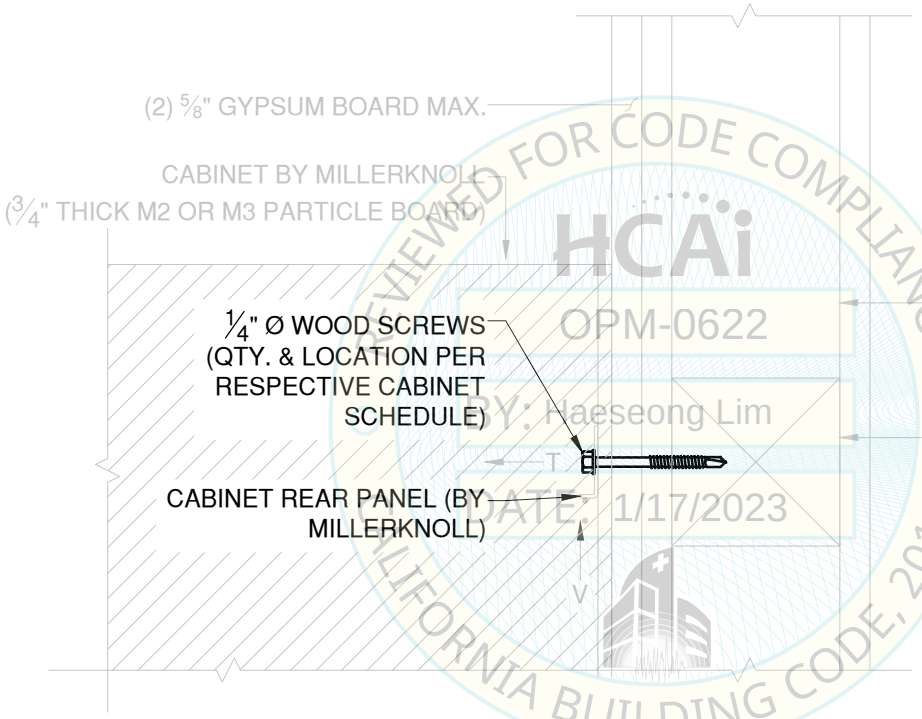

TYPICAL CABINET SUPPORTS AND ATTACHMENTS INTO WOOD STUD FRAMED WALL

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SHEET 25 OF 25

MORA SYSTEM

EQUIPMENT MANUFACTURER: MILLERKNOLL

EQUIPMENT TYPE: MORA CASEWORK

MODELS: CH-200, 210, 220, 230, 300, 301, 400, 405, 415, 420, 600, 607, 620

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